

REMARKS

New independent claim 20 corresponds to original claim 2, but limits the fine protrusions to feather-shape fine protrusions formed on the dielectric layer before energization. The feather-shape fine protrusions are further characterized as having a width of about 0.1 to about 120 nm and a height of about 0.1 to about 600 nm. Support is found, for example, at page 12, line 27- page 13, line 12 of the specification. Claim 4 has been rewritten in independent form as new claim 22, and reworded to more clearly convey that a majority of the fine protrusions overlay an outer surface of the dielectric layer and/or overlay an inner pore surface of the electric conductor within 10 μm from the outer surface. This embodiment of the invention is described at page 13, lines 13-25 of the specification.

New claim 22 corresponds to original claim 3. Support for new claim 23 is found, for example, at page 13, lines 13-21 of the specification. New claim 24 limits the fine protrusion to at least one member selected from a metal salt, a transition element-containing inorganic compound and a transition element-containing organic compound. See claim 5. Support for new claim 25 (the method comprises electrolytically forming the fine protrusions on the dielectric layer) finds support, for example, at page 26, lines 16-28. Claims 1-4 have been canceled.

No new matter has been entered. Entry of the amendments is respectfully requested.

Review and reconsideration on the merits are requested.

In response to the objection to claim 2, new claim 20 characterizes the fine protrusions as being feather-shaped protrusions having a specified width and height. The specification at page 13 characterizes the feather-shape protrusions as contrasted to the island-shape protrusions. Moreover, the island-shape protrusion is illustrated in Fig. 1, whereas the feather-shape protrusion is illustrated in Fig. 2 (page 14, lines 12-16 of the specification).

It is respectfully submitted that the language "feather-shape protrusion" as employed in new claim 20 conveys a definite structure distinguishable from, for example, island-shape protrusions and withdrawal of the objection is respectfully requested.

Claims 1, 2, 5, 6, 8, 9, and 14-19 were rejected under 35 U.S.C. § 102(b) as being anticipated by Tsuchiya *et al.* (U.S. Patent No. 4,943,892).

Applicant traverses, and respectfully requests the Examiner to reconsider in view of the amendment to the claims and the following remarks.

Tsuchiya *et al.* discloses a method of forming a capacitor, where the capacitor is formed by etching a conductor, Al or Ta, and anodizing the conductor in an acid to form a dielectric layer of Al_2O_3 or Ta_2O_5 . (See Tsuchiya *et al.*; col. 4, lines 12-15; col. 5, lines 6-11). Once the dielectric layer is formed, MnO_2 is chemically deposited to form a continuous layer or islands on the dielectric layer, and then a polymer is electrolytically deposited onto the electrode from a monomer containing solution. (See Tsuchiya *et al.*; col. 5, lines 11-55). The Examiner alleges that each and every element of claim 1 is present in the disclosure as described above.

The independent claims are claims 20 and 21.

Claim 20 which comprises forming feather-shaped fine protrusions on the dielectric layer is not met by Tsuchiya *et al.* which discloses forming MnO_2 islands on the dielectric layer. In the method of claim 21, a majority of the fine protrusions overlay an outer surface of the dielectric layer and/or overlay an inner pore surface of the electric conductor within 10 μm from the outer surface, which limitation is also not met by Tsuchiya *et al.* Regarding this last point, *assuming arguendo* that the valve metal foil of Tsuchiya *et al.* has pores, there is no disclosure as to the density of the pores or whether the majority of the manganese dioxide islands overlay an

outer surface of the dielectric layer and/or overlay an inner pore surface within 10 μm from the outer surface.

Because Tsuchiya *et al.* fails to meet each of the terms of independent claims 20 and 21, it is respectfully submitted that the present claims are not anticipated by Tsuchiya *et al.* and withdrawal of the foregoing rejection under 35 U.S.C. § 102(b) is respectfully requested.

Claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya *et al.* in view of Unno (U.S. Patent No. 7,202,495). The Examiner relied on Unno as disclosing fine protrusions having an average diameter of 0.15 to 80 nm as to claim 3, and protrusions present within 10 μm from the outer surface as to claim 4.

Applicant responds as follows.

Like Tsuchiya *et al.*, Unno also discloses an island-shaped protrusion layer different from the feather-shaped fine protrusions of present claim 20. Thus, there is no combination of Tsuchiya *et al.* and Unno which could arrive at the invention of claim 20, further assuming that these references are properly combinable in the first instance.¹ Thus, it is respectfully submitted that claim 20 and the claims depending therefrom are patentable over Tsuchiya *et al.* in view of Unno.

As shown above, Tsuchiya *et al.* also does not meet claim 21. That is, there is no disclosure in Tsuchiya *et al.* as to the density of the pores or whether the majority of the manganese dioxide islands described therein overlay an outer surface of the dielectric layer and/or overlay an inner pore surface within 10 μm from the outer surface. On the other hand,

¹ To establish *prima facie* obviousness of the claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP § 2143.03

there is nothing in Unno which suggests that gate electrode 101 (corresponding to the valve metal foil of Tsuchiya *et al.*) has pores or should be subjected to a pore-forming treatment. In fact, forming the gate electrode 101 with pores would have a dilaterous effect on the performance of the organic TFT. That is, Unno does not make up for the deficiencies of Tsuchiya *et al.* relative to present claim 21.

Regarding this last point, a comparison of Fig. 2 of the present specification with Fig. 2 of Unno clearly shows these differences. A sintered body having pores wherein fine protrusions are present is shown in Fig. 2 of the present specification when its outer surface is enlarged. The pores are formed in a succession from the outer surface to the inside of the sintered body. To the contrary, as shown in Fig. 2 of Unno, the fine patterns of protrusions are formed along a smooth plane, and pores and the like cannot be observed. Pores are clearly visible in Fig. 2 of the present specification, showing nearly the same area of outer surface as that in Fig. 2 of Unno (1000 sq. nanometers of the gate electrode). Fig. 2 of the present specification and Fig. 2 of Unno are reproduced below for comparison.

Fig. 2 of the Specification

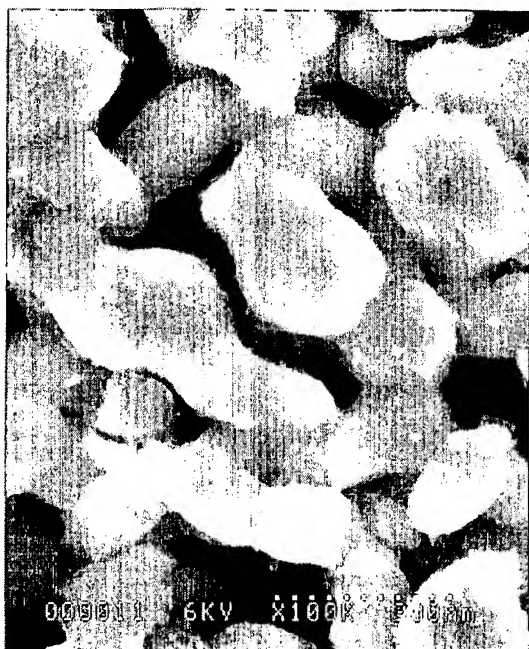
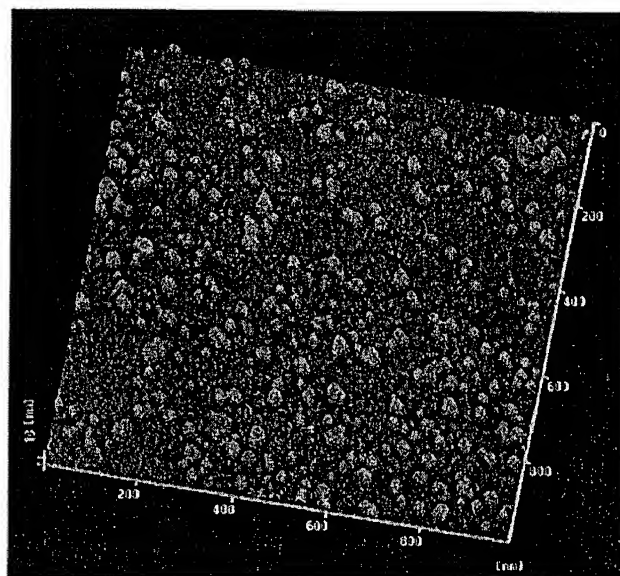


Fig. 2 of Unno



For the above reasons, it is respectfully submitted that claim 21 and the claims depending therefrom are patentable over Tsuchiya *et al.* in view of Unno, and withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya *et al.* in view of Kobatake *et al.* (U.S. Patent No. 6,368,363). The Examiner relied on Kobatake *et al.* as teaching a laminated electric conductor (See Kobatake *et al.*; col. 3, lines 55-59; col. 6, lines 9-11) having a surface layer of organic semiconductor and carbon.

Claims 10-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya *et al.* in view of Janse (U.S. Patent No. 4,724,053). Janse was cited as disclosing a polymer forming an organic semiconductor as required by claims 10-13.

Applicant relies on the response above with respect to the rejection of Tsuchiya *et al.* alone. As shown above, Tsuchiya *et al.* fails to meet one or more of the terms of each of claims

20 and 21, such that the combination thereof with either of Kobatake *et al.* or Janse also would not arrive at the claimed invention.

Withdrawal of the foregoing rejections under 35 U.S.C. § 103(a) is respectfully requested.

Withdrawal of all rejections and allowance of claims 5-25 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Abraham J. Rosner
Registration No. 33,276

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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